IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 1, December 2025
Impact Factor: 7.67

ENGINEX - "Curated Internship For Carrer Gateway"

Aryakantha K.S., Anish Bhande, P. Akash, Abhishek B.C, Dr Nirmala H
Dept. of Information Science and Engineering
Global Academy of Technology Bengaluru, India
aryaa.kanth@gmail.com, bhandeanish@gmail.com, p.akashkdl@gmail.com
abhishek1ga23is003@gmai.com, dr.nirmala@gat.ac.in

Abstract: *Enginex is a web-based internship management platform designed to streamline how students and placement departments interact with internship opportunities. The system provides dedicated dashboards for students and placement coordinators, enabling smooth profile creation, internship posting, and administrative monitoring. The platform focuses on transparency, ease of use, and institutional control, addressing limitations in traditional manual internship processes. Although the recommendation engine is still under development, the current version successfully delivers a functional, role-based system with secure authentication, real-time data handling, and a scalable architecture suitable for educational institutions*

Keywords: Enginex

I. INTRODUCTION

The rapid expansion of digital recruitment platforms has created a need for institution-specific systems that support transparent, structured, and skill-oriented internship management. Academic institutions often rely on manual processes that make it difficult for students to access relevant opportunities and for coordinators to manage postings efficiently. ENGinex addresses this gap by providing a unified web-based platform with dedicated dashboards for students and placement cell coordinators, simplifying tasks such as profile management, internship posting, and progress monitoring. Built using modern web technologies and cloud-based infrastructure, the system focuses on ease of use, scalability, and institutional control, while laying the groundwork for an upcoming explainable AI-based recommendation engine. This project aims to improve accessibility, reduce administrative effort, and create a more organized pathway for students seeking internships.

II. EASE OF USE

A. Platform Accessibility

Enginex has been designed to be simple, intuitive, and accessible for all user role - students, recruiters, and placement coordinators. The interface provides clear navigation, responsive layouts, and minimal input requirements to ensure that users can complete tasks quickly. Students can create profiles, upload resumes, and browse available internships with ease, while placement coordinators can manage postings, monitor applications, and oversee institutional activity from a unified dashboard. The system functions smoothly across devices and browsers, ensuring consistent usability for all users.

B. Maintaining the Integrity of the Specifications

All design components, including layout structure, API rules, database schema, and style conventions, are standardized to maintain uniformity throughout the platform. These specifications are enforced to ensure data consistency, security, and predictable behavior across modules. The platform uses role-based access control, predefined Firestore rules, and modular UI components to prevent unintended changes or structural inconsistencies. Such measures allow Enginex to

DOI: 10.48175/568

IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429 Volume 5, Issue 1, December 2025 Impact Factor: 7.67

operate reliably as part of a larger institutional workflow while supporting future upgrades without altering the core configuration.

B. Abbreviations and Acronyms (for Enginex)

Define acronyms on first use in the paper. Examples you will use in this project:
Enginex — the platform name (capitalize on first use)
SDG — Sustainable Development Goals
SSO — Single Sign-On
OTP — One-Time Password
RBAC — Role-Based Access Control
CI/CD — Continuous Integration / Continuous Deployment
API — Application Programming Interface

C. Units and Performance Metrics

Report runtime and performance metrics in SI units and consistent numeric formats. Examples for Enginex:
API response times: **ms** (e.g., 300 ms)
Data transfer/storage: **MB** (e.g., 50 MB)

D. Equations (if used)

If you include the matching math, present it cleanly (Times New Roman) and number equations consecutively at right. Example you may use for the matching engine (as an image if Word formatting is difficult):

$$S(A,B) = \frac{\sum w_i \mid A_i \cap B_i \mid}{\sum w_i \mid A_i \cup B_i \mid} \quad (1)$$

Explain every variable immediately after the equation.

API INTEGRATION — Practical Checklist (use this in Methods / Appendix)

You mentioned using: **JSearch**, **Y Combinator jobs feed**, and **Linked jobs (LinkedIn)**. For each external feed include the following in your report and in a project config file.
For each API include (short template)
API Name: JSearch / Y Combinator Jobs / Linked Jobs (LinkedIn)
Provider & Purpose: one-line description (e.g., "JSearch — job search aggregator used to pull curated internship listings").
Base URL & Key endpoint(s): e.g., https://api.jsearch.com/v1/search (example) — list exact endpoints used.
Authentication: API key / OAuth 2.0 / none —
where the key is stored (environment variables).
Rate limits: X requests per minute/hour — plan caching/backoff accordingly.
Response fields used: Map provider fields to your DB model (example: job_id, title, company, location, skills, description, apply_url, posted_date).
Field normalization: rules for converting provider fields to Enginex schema (e.g., skills → lowercase tokens, split on comma).
Error handling: retries with exponential backoff, logging, and dead-letter queue for failed fetches.
Caching policy: TTL (e.g., cache listings for 6 hours) to avoid hitting rate limits and improve performance.
Privacy & Terms compliance: note any TOS restrictions and whether the provider allows storage/caching.
Env var names: e.g., JSEARCH_API_KEY, YC_JOBS_ENDPOINT, LINKEDIN_CLIENT_ID, LINKEDIN_CLIENT_SECRET.
Example curl / sample response snippet: include a minimal sample to show fields you read.

IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429 Volume 5, Issue 1, December 2025 Impact Factor: 7.67

Include this block verbatim (or a shortened table) as an Appendix entry in your report for reproducibility.

After completing the content development for the ENGinex internship management system, the paper is prepared for formatting within the IEEE two-column template. All text, section headings, and references must be pasted into the template only after the content is finalized. Once inserted, each section should be assigned the appropriate IEEE style using the MS Word "Styles" panel to maintain formatting consistency throughout the document. The prepared text, including descriptions of modules, APIs, architecture, and implementation details, should be

III. AUTHORS AND AFFILIATIONS

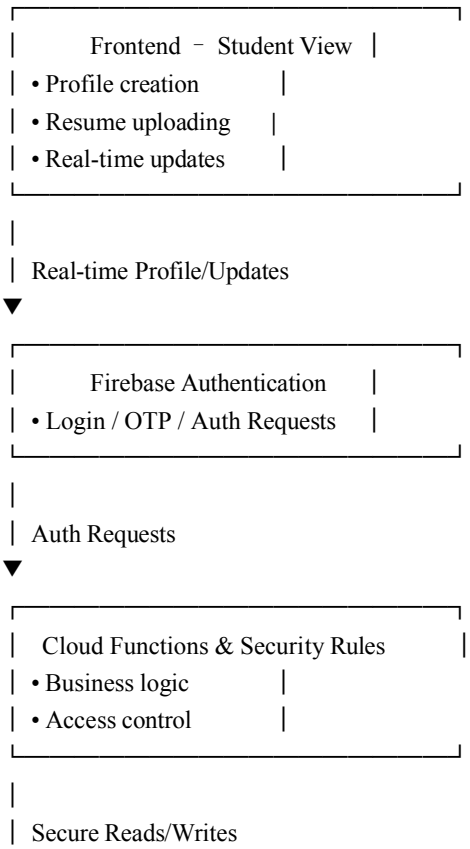
For ENGinex, the authors can be entered as follows:

ARYAKANTHA K. S. – BACKEND AND FIREBASE INTEGRATION
ANISH BHANDE – SYSTEM ARCHITECTURE & ALGORITHM RESEARCH
AKASH P. – FRONTEND DEVELOPMENT
ABHISHEK B. C. – TESTING, DEPLOYMENT & API INTEGRATION
All authors belong to: Department of Information Science and Engineering, Global Academy of Technology, Bengaluru, India.

Adjust the number of columns only if the author count is fewer than six. Remove extra author placeholders from the template to avoid formatting inconsistencies.

A. Figures and Tables

a) Below is the structural representation of the system architecture used in the project. The diagram illustrates the flow of data between the frontend, backend services, authentication layer, database, recommendation engine, and analytics module.



IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429 Volume 5, Issue 1, December 2025 Impact Factor: 7.67

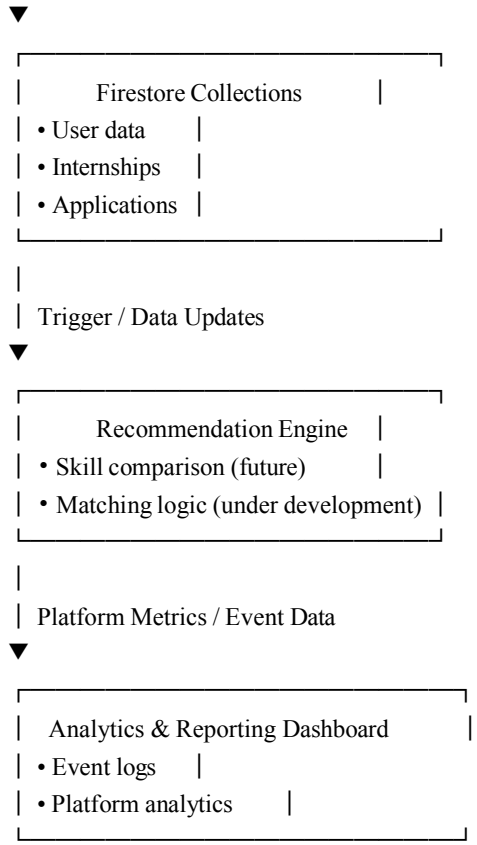


Fig. 1. System architecture of the Enginex Internship Placement Platform showing data flow between frontend, authentication, backend logic, database, recommendation engine, and analytics dashboard.

ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to **Dr. Nirmala H**, Professor, Department of Information Science and Engineering, Global Academy of Technology, Bengaluru, for her continuous guidance, valuable feedback, and encouragement throughout the development of this project. The authors also thank the faculty members and technical staff of the department for providing the necessary support and resources. Finally, the authors acknowledge their peers and teammates for their collaboration, suggestions, and assistance during the implementation and testing of the Enginex platform.

REFERENCES

[1]. Firebase Documentation, "Firebase Authentication and Firestore," Google Developers, 2024. [Online]. Available: https://firebase.google.com/docs
[2]. Next.js Documentation, “App Router, Rendering, and Deployment,”
[3]. Vercel Inc., 2024. [Online]. Available: https://nextjs.org/docs
[4]. Tailwind CSS, “Utility-First CSS Framework Documentation,” Tailwind
[5]. Labs, 2024. [Online]. Available: https://tailwindcss.com/docs
[6]. Prisma ORM Documentation, “Prisma Client, Schema, and Migrations,”
[7]. Prisma Data Inc., 2024. [Online]. Available: https://www.prisma.io/docs
[8]. JSearch API, “Job Search and Aggregation API,” RapidAPI Marketplace, 2024. [Online]. Available: https://rapidapi.com/letscrape- 6bRBa3QguO5/api/jsearch

IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 1, December 2025
Impact Factor: 7.67

[9]. Y-Combinator Jobs API, "YC Startup Job Listings and Company Data," Y Combinator, 2024. [Online]. Available: https://www.ycombinator.com/jobs/api

[10]. LinkedIn Jobs API (Unofficial), "Job and Internship Listings Programmatically," LinkedIn Developers, 2024. [Online]. Available: https://learn.microsoft.com/linkedin

[11]. GitHub Actions, "Continuous Integration and Deployment Workflows,"

[12]. GitHub, 2024. [Online]. Available: https://docs.github.com/actions

[13]. Docker Documentation, "Container Engine, Images, and Deployment,"

[14]. Docker Inc., 2024. [Online]. Available: https://docs.docker.com

[15]. United Nations, "Sustainable Development Goals: SDG 4 & SDG 8," UN SDG Knowledge Platform, 2015. [Online]. Available: https://sdgs.un.org/goals